

REGULATIONS IN THE ERA OF RAPID TECHNOLOGICAL CHANGES

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Agenda

- ❑ The Rationale for Regulation
- ❑ The Technological Trends
- ❑ New Regulatory Paradigm
- ❑ Implications for Market Structure
- ❑ Regulatory Challenges: Interconnection
- ❑ Regulatory Challenges: Cost Based Regime
- ❑ Regulatory Challenges: Sector Specific Regime
- ❑ Regulatory Challenges: Technological Neutrality
- ❑ Regulatory Challenges: Standardization

The Rationale for Regulation...

- ❑ Historically, the main objective of telecom regulation was to ensure the optimal performance of the POTS (Plain Old Telephone Services) network in terms of accessibility, affordability and QoS
- ❑ Once telecom markets were liberalized , external regulation became necessary as part of the separation between operations, policy making and regulation
- ❑ The main focus areas of regulation were interconnection, tariffs, universal access/service and the management of limited resources

The Rationale for Regulation

- ❑ Existing regime is currently challenged by technological changes/innovations.
- ❑ Development of new technologies and the convergence of existing ones are leading to merging of markets and services
- ❑ This has substantial impact on the components of current regulatory design and has created the need for changes and redesign
- ❑ Challenges for regulators and policy makers are to keep track of new technologies and respond, in time, to protect investments, consumer interest, promote competition and to successfully realize the potential of alternative network infrastructures.

The Technological Trends

- ❑ Three main developments-digitalization, computerization and packet switched technologies
- ❑ Coupled with the emergence of the Internet Protocol, new infrastructures and convergence have led to the development and formation of different technologies/applications.
- ❑ The deployment of IP in virtually all infrastructures and services has led to fundamental separation between the network layer and the service and application layers.
- ❑ This has enabled different services belonging to separate networks to come together
- ❑ It is, therefore, not just technology but also services leading to new ways of doing business and interacting with society.

Major Consequences

- End of the service specific Network Models
- The Separation of infrastructure and services.

New Regulatory Paradigm

- Regulation are getting affected by technological developments in two different ways:
 - Firstly, new technologies are leading to the development of new services and modes of delivery, unforeseen by existing regulation.
 - Secondly, dynamic market structure and the level of competition.

Implications for Market Structure

- ❑ Technology impacts the telecom market in different ways.
- ❑ New technologies enable expansion of network capacity and open up the network for a wide range of new applications and products.
- ❑ New innovations have blurred the boundaries of the telecom networks.
- ❑ Technological implications for market structure are, therefore, more relevant for regulators vis-à-vis the requirement to distinguish between different types of technologies.

Regulatory Challenges: Interconnection

- ❑ Interconnection is an important tool for the facilitation of competition in both services and facilities.
- ❑ Therefore, in the emerging scenario, Interconnection still matters to enable the creation of new alternative communication networks,
- ❑ Convergence and increasing induction of packet switched services are, however, bound to affect the prevailing interconnection regime.
- ❑ Further, disconnect between infrastructure and services also requires redefining of the interconnection regulation.
- ❑ Switched interconnection of voice telephony and the related charging mechanisms are becoming less important as phone calls will only be one of the number of different types of communication services in a packet switched network.

Regulatory Challenges: Cost Based Regime

- ❑ The change in technology from circuit-switched to IP-based networks affects the cost of providing and operating the networks.
- ❑ IP telephony, for example, has dramatic impacts by reducing the costs of providing voice telephony services.
- ❑ Consequently, regulator must be aware of new cost structures.
- ❑ This creates strong downward pressure on retail prices.
- ❑ There is a need to revise the existing determinants

Regulatory Challenges: Cost Based Regime

- ❑ Different costs of competing networks require implementation of asymmetrical charging in a cost based regime, which may be a real challenge for the regulators.
- ❑ Also, there may be a need to prescribe capacity-based interconnection rules to take into account the changes in the nature of the networks and services.
- ❑ Sustainability of POTS operators is a big challenge for regulators and policy makers. These operators may have to undertake unanticipated write-offs of the value of their existing assets.

Regulatory Challenges: Sector Specific Regime

- ❑ The present sector specific regulatory regime in telecom was implemented in connection with the liberalization process.
- ❑ The main fields of sector specific regulation are Interconnection, Universal Service/Access and the regulation of limited resources – spectrum, infrastructure etc.
- ❑ Convergence of technologies and development of new services is opening up telecom markets to increasing competition, providing new modes of access and eases the use of scarce resources like spectrum.

Regulatory Challenges: Sector Specific Regime

- ❑ Service Specific regulations may, therefore, be irrelevant in the emerging scenarios.
- ❑ However, there will be requirement of some kind of unified regulation for smooth transition and management of scarce resources, if any.

Regulatory Challenges: Technological Neutrality

- ❑ Technology neutrality is a prescription for avoiding intervention in the choice of technology solutions in markets.
- ❑ It has become a basic guidepost for regulatory intervention around the world.
- ❑ Technology neutrality is partly based on technology convergence as similar services can be offered on different technology platforms.
- ❑ Further, it requires that the regulation should aim to promote competition between different technology solutions, instead of 'picking a winner'

Regulatory Challenges: Technological Neutrality

- ❑ Technology-neutrality is considered as a fairly good regulatory principle in a converged environment.
- ❑ Neutrality ensures a fair and predictable regulatory regime, flexible enough to embrace future technological changes and market developments.
- ❑ The question of how to adopt a technology-neutral interconnection regime, in a context where IP-based networks are also becoming the voice traffic carriers, is of growing importance for regulators.

Regulatory Challenges: Standardization

- ❑ Standardization activities have changed immensely since liberalization started in the telecom sector
- ❑ The focus has shifted from network aspects to application and services issues.
- ❑ The regulatory approach should foster introduction of new standards and promote the use of open standards.
- ❑ The standardization activity should aim at facilitating market developments

Thank you
